REMARKS

Claim 1 was, again, rejected as anticipated by Yamaguchi.

A. Does Yamaguchi Teach Determining Signal Attributes and Noise Attributes Of At Least Two Signal Portions From Said Target Speech Data?

The claim element requires that there be signal attributes and noise attributes of at least two signal portions from the target speech data. In other words, there must be two signal portions, they must be target speech data, not training speech data, and then signal attributes and noise attributes must be determined.

The rejection relies on Yamaguchi at column 9, lines 3-14 and column 11, lines 27-32, in support of the anticipation rejection. However, the material at column 9, lines 3-14, is with respect to the situation where the background noise in the target is different than the background noise during the training. See column 8, lines 60-65. Thus, a single signal portion, at best, is broken into speech and noise. See column 9, lines 3-7. Thus, there is no breaking up of the target speech data into two signal portions. Instead, one signal portion, at best, is broken up into speech and noise.

If one signal portion is broken into speech and noise, it would not be possible to determine, for two signal portions, signal attributes and noise attributes for noise and signal. One could not determine signal attributes and noise attributes from two things, one of which is only signal and the other of which is only noise. Thus, necessarily determining signal attributes and noise attributes from two signal portions involves analyzing two signal portions, each of which include signal and noise. In contrast, the cited reference is taking one signal portion and analyzing signal and noise. This fails to meet the claim limitation.

The office action also relies for this element on column 11, lines 27-32. However, this material clearly relates to the training situation, not the situation where a target speech data is to be analyzed. For example, in column 11, line 23, it is explained that in the model adaptation apparatus, first at a time of model training, the initial noise is obtained from the background noise. In the material cited in the office action, the reference goes on to state that the initial noise HMM is composed with the clean speech HMMs stored in the clean speech HMM memory unit. Thus, clearly, what is being talked about here is the model training, not the target speech analysis portion. Thus, the cited material fails to support the rejection.

B. Does Yamaguchi Teach Deriving a Distance Measure for One Signal Portion By Using the Signal Attributes of Both Signal Portions?

As pointed out above in the material cited, Yamaguchi is only looking at noise and signal of a single signal portion. Thus, he does not derive a distance measure by using signal attributes of two signal portions.

The cited material is at column 11, lines 38-45. In contrast to the material cited above, clearly this material relates to the time of actual recognition. See column 11, line 38. However, the discussion of the mismatch between the noisy speech and the initial noisy speech HMMs refers back to the training session at column 11, line 27. Thus, the input noisy speech and the initial noisy speech HMMs refers to the target and the training material. This fails to support deriving a distance measure from one signal portion by using signal attributes of both signal portions. It only talks about noise and not signal portions and, as explained above, it does not talk about using two different signal attributes. A signal portion necessarily, as defined in the third clause of the claim, includes signal attributes and noise attributes.

The discussion here is only about noise and the distinction is between input noisy speech and initial noisy speech HMMs which are part of the training speech data. For example, referring to Figure 4, which is cited in the material cited in the office action, the step S4 is noted as noise observed at time of recognition. Thus, all that is being talked about here is noise data and there is no analysis of two different signal portions, each of which includes signal attributes and noise attributes.

In view of these remarks, reconsideration of the rejection of claim 1 is respectfully requested.

C. Is Claim 6 Anticipated by Yamaguchi?

Claim 6 calls for extracting from a noisy speech signal an utterance, said noisy speech signal including a first portion with first signal and noise attributes and a second portion with second signal and noise attributes. Thus, again, it is clear that two portions of the noisy speech must be obtained, each of which includes signal and noise. The rejection, based on simply looking at differences between training noise and target noise, simply fails to meet the limitations since there are no analysis based on two different portions of the target signal, as explained above.

Thus, for at least these reasons, reconsideration of the rejection of claim 6 is respectfully requested.

D. Is Claim 11 Anticipated by Yamaguchi?

As indicated by the Examiner, claim 11 may be analyzed in the same way as claim 1. Thus, reconsideration of rejection of claim 11 is respectfully requested.

E. Is Claim 16 Anticipated by Yamaguchi?

As pointed out by the Examiner, claim 16 can be analyzed in the same way as claim 6. Thus, reconsideration of rejection of claim 16 is respectfully requested.

F. Is Claim 27 Anticipated by Yamaguchi?

As pointed out by the Examiner, claim 27 can be analyzed similarly to claim 1. Thus, reconsideration of rejection of claim 27 is respectfully requested.

G. Is Claim 29 Anticipated by Yamaguchi?

As indicated by the Examiner, claim 29 can be analyzed similarly to claim 11.

The analysis above may be applied. In addition, the assertion of official notice of well known art is hereby respectfully challenged. There is no reason to believe that speech recognition has been implemented in a mobile handset. Therefore, the Examiner is respectfully requested to cite a reference in support of the rejection.

In view of these remarks, reconsideration is respectfully requested.

Respectfully submitted,

Date: January 6, 2005

Timothy N. Trop, Reg. No. 28,994
TROP, PRUNER & HU, P.C.
8554 Katy Freeway, Ste. 100
Houston, TX 77024
713/468-8880 [Phone]
713/468-8883 [Fax]